

WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:
a first acquisition section, arranged to acquire color data of an object;
- 5 a second acquisition section, arranged to acquire a plurality of spectral distribution data on the basis of the configuration of spectral distribution data defined in accordance with the acquired color data; and
a generator, arranged to generate image data
- 10 constructed by the acquired color data and the plurality of spectral distribution data.
2. An image processing apparatus comprising:
an input section, arranged to input image data constructed by color data and a plurality of spectral
- 15 distribution data; and
an estimator, arranged to estimate spectral distribution data of a total wavelength region on the basis of the configuration of the spectral distribution data defined in accordance with the color data.
- 20 3. An image processing apparatus comprising:
a first acquisition section, arranged to acquire color data of an object;
- a second acquisition section, arranged to acquire a plurality of spectral distribution data on the basis
- 25 of the configuration of spectral distribution data defined in accordance with the acquired color data;
an estimator, arranged to estimate spectral

distribution data of a total wavelength region on the basis of the configuration of the spectral distribution data; and

a generator, arranged to generate the spectral
5 distribution data of the total wavelength region from the acquired color data and the plurality of spectral distribution data, on the basis of the estimated spectral distribution data of the total wavelength region.

10 4. The apparatus according to claim 3, wherein the configuration of the spectral distribution data is defined as a combination of the spectral distribution data.

5. The apparatus according to claim 3, wherein the
15 configuration of the spectral distribution data is defined by a spectral distribution defined in accordance with the color data.

6. The apparatus according to claim 3, wherein the combination of the color data and the configuration of
20 the spectral distribution data is predetermined.

7. The apparatus according to claim 3, wherein the configuration of the spectral distribution data is arbitrarily changeable.

8. An image processing method comprising the steps
25 of:

acquiring color data of an object;
acquiring a plurality of spectral distribution

data on the basis of the configuration of spectral
distribution data defined in accordance with the
acquired color data; and

generating image data constructed by the acquired
5 color data and the plurality of spectral distribution
data.

9. An image processing method comprising the steps
of:

inputting image data constructed by color data
10 and a plurality of spectral distribution data; and
estimating spectral distribution data of a total
wavelength region on the basis of the configuration of
the spectral distribution data defined in accordance
with the color data.

15 10. An image processing method comprising the steps
of:

acquiring color data of an object;
acquiring a plurality of spectral distribution
data on the basis of the configuration of spectral
20 distribution data defined in accordance with the
acquired color data;
estimating spectral distribution data of a total
wavelength region on the basis of the configuration of
the spectral distribution data; and
25 generating the spectral distribution data of the
total wavelength region from the acquired color data
and the plurality of spectral distribution data, on the

basis of the estimated spectral distribution data of the total wavelength region.

11. A computer program product storing a computer readable medium comprising a computer program code, for
5 an image processing method, comprising process procedure code for:

acquiring color data of an object;

- acquiring a plurality of spectral distribution data on the basis of the configuration of spectral
10 distribution data defined in accordance with the acquired color data; and

generating image data constructed by the acquired color data and the plurality of spectral distribution data.

12. A computer program product storing a computer readable medium comprising a computer program code, for
15 an image processing method, comprising process procedure code for:

- inputting image data constructed by color data
20 and a plurality of spectral distribution data; and

estimating spectral distribution data of a total wavelength region on the basis of the configuration of the spectral distribution data defined in accordance with the color data.

13. A computer program product storing a computer readable medium comprising a computer program code, for
25 an image processing method, comprising process

procedure code for:

acquiring color data of an object;

acquiring a plurality of spectral distribution
data on the basis of the configuration of spectral

- 5 distribution data defined in accordance with the
acquired color data;

estimating spectral distribution data of a total
wavelength region on the basis of the configuration of
the spectral distribution data; and

- 10 generating the spectral distribution data of the
total wavelength region from the acquired color data
and the plurality of spectral distribution data, on the
basis of the estimated spectral distribution data of
the total wavelength region.

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